

SAP20 Rec'd PCT/P10 18 JUL 2006

SEQUENCE LISTING

<110> The General Hospital Corporation et al.

<120> Methods For Identifying Candidate Compounds For Treating, Reducing, or Preventing Pathogenic Infections

<130> 00786/455W03

<150> US 60/538,361
<151> 2004-01-22

<150> US 60/538,278
<151> 2004-01-21

<160> 17

<170> FastSEQ for Windows Version 4.0

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<212> DNA
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<211> 852
<212> DNA

<213> *Pseudomonas aeruginosa*

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<210> 3

<211> 1047

<212> DNA

<213> *Pseudomonas aeruginosa*

<400> 3

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<210> 4

<211> 1014

<212> DNA

<213> *Pseudomonas aeruginosa*

<400> 4

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cgccacccgtt atcacgtcgat gcccggacag gcggtcagcg cgctgtatgtt gccggcgccg 180
cgccaggccca tcgaggctgc cgggctgtcg cccggaggaca tcgacccgtt gctggtaac 240
accctgtcgcc cgaggccacca cgaccgtcc caggcctgc tcgtcccgcc gctgtggcc 300
ctgcgcgaca tcccggtact ggatattccgg gcacagtgcgac gctgggttgc gtacggcttg 360
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gaggtgttgtt ccaagcgcat ggactgttcg gaccgcggcc gcaacctgtc gatcctgtc 480
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 gacctgcggcc tggcgccga cggcaactac ttgcacactgc tgatgaccgc ggcgcgggt 600
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<210> 5

<211> 906

<212> DNA

<213> *Pseudomonas aeruginosa*

<400> 5

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<210> 6

<211> 1149

<212> DNA

<213> *Pseudomonas aeruginosa*

<400> 6

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<210> 7
 <211> 1197
 <212> DNA
 <213> *Pseudomonas aeruginosa*

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 <211> 517
 <212> PRT
 <213> *Pseudomonas aeruginosa*

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 35 40 45
 Leu Leu Lys Pro Gly Asp Arg Val Val Leu Ala Leu Asn Asp Ser Pro
 50 55 60
 Ser Leu Ala Cys Leu Phe Leu Ala Cys Ile Ala Val Gly Ala Ile Pro
 65 70 75 80
 Ala Val Ile Asn Pro Lys Ser Arg Glu Gln Ala Leu Ala Asp Ile Ala
 85 90 95
 Ala Asp Cys Gln Ala Ser Leu Val Val Arg Glu Ala Asp Ala Pro Ser
 100 105 110
 Leu Ser Gly Pro Leu Ala Pro Leu Thr Leu Arg Ala Ala Ala Gly Arg
 115 120 125
 Pro Leu Leu Asp Asp Phe Ser Leu Asp Ala Leu Val Gly Pro Ala Asp
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 145 150 155 160

Leu Gln Tyr Thr Ser Gly Ser Thr Gly Ala Pro Lys Gly Val Met His
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 Ser Leu Arg Asn Thr Leu Gly Phe Cys Arg Ala Phe Ala Thr Glu Leu
 180 185 190
 Leu Ala Leu Gln Ala Gly Asp Arg Leu Tyr Ser Ile Pro Lys Met Phe
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 Phe Gly Tyr Gly Met Gly Asn Ser Leu Phe Phe Pro Trp Phe Ser Gly
 210 215 220
 Ala Ser Ala Leu Leu Asp Asp Thr Trp Pro Ser Pro Glu Arg Val Leu
 225 230 235 240
 Glu Asn Leu Val Ala Phe Arg Pro Arg Val Leu Phe Gly Val Pro Ala
 245 250 255
 Ile Tyr Ala Ser Leu Arg Pro Gln Ala Arg Glu Leu Leu Ser Ser Val
 260 265 270
 Arg Leu Ala Phe Ser Ala Gly Ser Pro Leu Pro Arg Gly Glu Phe Glu
 275 280 285
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 Glu Val Gly His Val Phe Leu Ala Asn Arg Pro Gly Gln Ala Arg Ala
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 Asp Ser Thr Gly Leu Pro Leu Pro Gly Tyr Glu Cys Arg Leu Val Asp
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 Arg Glu Gly His Thr Ile Glu Glu Ala Gly Arg Gln Gly Val Leu Leu
 340 345 350
 Val Arg Gly Pro Gly Leu Ser Pro Gly Tyr Trp Arg Ala Ser Glu Glu
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 Gln Gln Ala Arg Phe Ala Gly Gly Trp Tyr Arg Thr Gly Asp Leu Phe
 370 375 380
 Glu Arg Asp Glu Ser Gly Ala Tyr Arg His Cys Gly Arg Glu Asp Asp
 385 390 395 400
 Leu Phe Lys Val Asn Gly Arg Trp Val Val Pro Thr Gln Val Glu Gln
 405 410 415
 Ala Ile Cys Arg His Leu Pro Glu Val Ser Glu Ala Val Leu Val Pro
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 Thr Cys Arg Leu His Asp Gly Leu Arg Pro Thr Leu Phe Val Thr Leu
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 Ala Thr Pro Leu Asp Asp Asn Gln Ile Leu Leu Ala Gln Arg Ile Asp
 450 455 460
 Gln His Leu Ala Glu Gln Ile Pro Ser His Met Leu Pro Ser Gln Leu
 465 470 475 480
 His Val Leu Pro Ala Leu Pro Arg Asn Asp Asn Gly Lys Leu Ala Arg
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 Glu Glu Arg Ala Cys
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<210> 9
 <211> 283
 <212> PRT
 <213> *Pseudomonas aeruginosa*

<400> 9
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35	40	45
Ala Ala Val Lys Pro Glu Glu Ile Asp Leu Ile Val Gly Leu Ala Leu		
50	55	60
Ser Pro Asp His Leu Ile Glu Asn Arg Asp Ile Met Ala Pro Lys Ile		
65	70	75
Gly His Pro Leu Gln Lys Val Leu Gly Ala Asn Arg Ala His Val Phe		
85	90	95
Asp Leu Thr Asp Ser Ser Leu Ala Arg Ala Leu Tyr Val Val Asp Thr		
100	105	110
Leu Ala Ser Asp Gln Gly Tyr Arg Asn Val Leu Val Val Arg Gly Glu		
115	120	125
Ser Ser Gln Gly Leu Glu Val Asp Ser Glu Ser Gly Phe Ala Leu Ala		
130	135	140
Asp Gly Ala Leu Ala Leu Leu Cys Arg Pro Thr Gly Lys Ala Ala Phe		
145	150	155
Arg Arg Gly Ala Leu Gly Asp Pro Ala Gln Glu Trp Leu Pro Leu		
165	170	175
Ser Ile Pro Leu Asn Thr Asp Ile Arg Gln Val Gly Asp Val Lys Gly		
180	185	190
His Leu Asn Leu Pro Ala Gln Pro Gly Leu Pro Glu Ala Val Arg Ala		
195	200	205
Gly Phe Thr Arg Leu Ala Gly Asp Phe Pro Gln Leu Asn Trp Val Arg		
210	215	220
Glu Glu Trp Phe Gly Gln Gly Arg Pro Asp Gly Arg Cys Leu Gly Pro		
225	230	235
Phe Glu Leu Ala Ser Gln Leu Arg Ala Ala Gln Arg Asp Arg Leu Asp		
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<210> 10

<211> 348

<212> PRT

<213> Pseudomonas aeruginosa

<400> 10

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35	40	45
Pro Arg Asn Gly Glu Asn Glu Phe Ser Leu Val Val Arg Ala Ala Glu		
50	55	60
Arg Leu Leu Arg Ser Ser Asp Thr Ala Pro Asp Ser Val Asp Met Leu		
65	70	75
Ile Cys Ser Ala Ser Ser Pro Ile Met Thr Asp Ala Gly Asp Val Leu		
85	90	95
Pro Asp Leu Arg Gly Arg Leu Tyr Pro Arg Met Ala Asn Val Leu Ser		
100	105	110
Lys Gln Leu Gly Leu Ser Arg Ala Leu Pro Leu Asp Ser Gln Met Glu		
115	120	125

Cys Ala Ser Phe Leu Leu Asn Leu Arg Leu Ala Ala Ser Met Ile Arg
 130 135 140
 Gln Gly Lys Ala Glu Lys Val Leu Val Val Cys Ser Glu Tyr Ile Ser
 145 150 155 160
 Asn Leu Leu Asp Phe Thr Ser Arg Thr Ser Thr Leu Phe Ala Asp Gly
 165 170 175
 Cys Ala Val Ala Leu Leu Thr Arg Gly Asp Asp Asp Ser Cys Asp Leu
 180 185 190
 Leu Ala Ser Ala Glu His Ser Asp Ala Thr Phe Tyr Glu Val Ala Thr
 195 200 205
 Gly Arg Trp Arg Leu Pro Glu Asn Pro Thr Gly Glu Ala Lys Pro Arg
 210 215 220
 Leu Tyr Phe Ser Leu Phe Ser Asp Gly Gln Asn Lys Met Ala Ser Phe
 225 230 235 240
 Val Pro Thr Asn Val Pro Ile Ala Met Arg Arg Ala Leu Glu Lys Ala
 245 250 255
 Gly Leu Gly Ser Asp Asp Ile Asp Tyr Phe Val Phe His Gln Pro Ala
 260 265 270
 Pro Phe Leu Val Lys Ala Trp Ala Glu Gly Ile Gly Ala Arg Pro Glu
 275 280 285
 Gln Tyr Gln Leu Thr Met Gly Asp Thr Gly Val Met Ile Ser Val Ser
 290 295 300
 Ile Pro Tyr Thr Leu Met Thr Gly Leu Arg Glu Gly Lys Ile Arg Pro
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 340 345

<210> 11
 <211> 337
 <212> PRT
 <213> *Pseudomonas aeruginosa*

<400> 11
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 35 40 45
 Glu Gln Ala Val Ser Ala Leu Met Val Pro Ala Ala Arg Gln Ala Ile
 50 55 60
 Glu Ala Ala Gly Leu Leu Pro Glu Asp Ile Asp Leu Leu Val Asn
 65 70 75 80
 Thr Leu Ser Pro Asp His His Asp Pro Ser Gln Ala Cys Leu Ile Gln
 85 90 95
 Pro Leu Leu Gly Leu Arg His Ile Pro Val Leu Asp Ile Arg Ala Gln
 100 105 110
 Cys Ser Gly Leu Leu Tyr Gly Leu Gln Met Ala Arg Gly Gln Ile Leu
 115 120 125
 Ala Gly Leu Ala Arg His Val Leu Val Val Cys Gly Glu Val Leu Ser
 130 135 140
 Lys Arg Met Asp Cys Ser Asp Arg Gly Arg Asn Leu Ser Ile Leu Leu
 145 150 155 160
 Gly Asp Gly Ala Gly Ala Val Val Ser Ala Gly Glu Ser Leu Glu

165	170	175
Asp Gly Leu Leu Asp Leu Arg Leu Gly Ala Asp Gly Asn Tyr Phe Asp		
180	185	190
Leu Leu Met Thr Ala Ala Pro Gly Ser Ala Ser Pro Thr Phe Leu Asp		
195	200	205
Glu Asn Val Leu Arg Glu Gly Gly Glu Phe Leu Met Arg Gly Arg		
210	215	220
Pro Met Phe Glu His Ala Ser Gln Thr Leu Val Arg Ile Ala Gly Glu		
225	230	235
Met Leu Ala Ala His Glu Leu Thr Leu Asp Asp Ile Asp His Val Ile		
245	250	255
Cys His Gln Pro Asn Leu Arg Ile Leu Asp Ala Val Gln Glu Gln Leu		
260	265	270
Gly Ile Pro Gln His Lys Phe Ala Val Thr Val Asp Arg Leu Gly Asn		
275	280	285
Met Ala Ser Ala Ser Thr Pro Val Thr Leu Ala Met Phe Trp Pro Asp		
290	295	300
Ile Gln Pro Gly Gln Arg Val Leu Val Leu Thr Tyr Gly Ser Gly Ala		
305	310	315
Thr Trp Gly Ala Ala Leu Tyr Arg Lys Pro Glu Glu Val Asn Arg Pro		
325	330	335
Cys		

<210> 12
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 <213> *Pseudomonas aeruginosa*

<400> 12			
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20	25	30	
Ser Trp Ala Leu Val Glu Gly Ile Ser Arg Asp Ala Glu Leu Val			
35	40	45	
Trp Ala Asp Leu Cys Arg Trp Val Ala Asp Pro Ser Gln Val His Tyr			
50	55	60	
Trp Leu Ile Thr His Lys His Tyr Asp His Cys Gly Leu Leu Pro Tyr			
65	70	75	80
Leu Cys Pro Arg Leu Pro Asn Val Gln Val Leu Ala Ser Glu Arg Thr			
85	90	95	
Cys Gln Ala Trp Lys Ser Glu Ser Ala Val Arg Val Val Glu Arg Leu			
100	105	110	
Asn Arg Gln Leu Leu Arg Ala Glu Gln Arg Leu Pro Glu Ala Cys Ala			
115	120	125	
Trp Asp Ala Leu Pro Val Arg Ala Val Ala Asp Gly Glu Trp Leu Glu			
130	135	140	
Leu Gly Pro Arg His Arg Leu Gln Val Ile Glu Ala His Gly His Ser			
145	150	155	160
Asp Asp His Val Val Phe Tyr Asp Val Arg Arg Arg Arg Leu Phe Cys			
165	170	175	
Gly Asp Ala Leu Gly Glu Phe Asp Glu Ala Glu Gly Val Trp Arg Pro			
180	185	190	
Leu Val Phe Asp Asp Met Glu Ala Tyr Leu Glu Ser Leu Glu Arg Leu			
195	200	205	

Gln Arg Leu Pro Thr Leu Leu Gln Leu Ile Pro Gly His Gly Gly Leu
 210 215 220
 Leu Arg Gly Arg Leu Ala Ala Asp Gly Ala Glu Ser Ala Tyr Thr Glu
 225 230 235 240
 Cys Leu Arg Leu Cys Arg Arg Leu Leu Trp Arg Gln Ser Met Gly Glu
 245 250 255
 Ser Leu Asp Glu Leu Ser Glu Glu Leu His Arg Ala Trp Gly Gly Gln
 260 265 270
 Ser Val Asp Phe Leu Pro Gly Glu Leu His Leu Gly Ser Met Arg Arg
 275 280 285
 Met Leu Glu Ile Leu Ser Arg Gln Ala Leu Pro Leu Asp
 290 295 300

<210> 13
 <211> 382
 <212> PRT
 <213> *Pseudomonas aeruginosa*

<400> 13
 Met Thr Val Leu Ile Gln Gly Ala Gly Ile Ala Gly Leu Ala Leu Ala
 1 5 10 15
 Arg Glu Phe Thr Lys Ala Gly Ile Asp Trp Leu Leu Val Glu Arg Ala
 20 25 30
 Ser Glu Ile Arg Pro Ile Gly Thr Gly Ile Thr Leu Ala Ser Asn Ala
 35 40 45
 Leu Thr Ala Leu Ser Ser Thr Leu Asp Leu Asp Arg Leu Phe Arg Arg
 50 55 60
 Gly Met Pro Leu Ala Gly Ile Asn Val Tyr Ala His Asp Gly Ser Met
 65 70 75 80
 Leu Met Ser Met Pro Ser Ser Leu Gly Gly Asn Ser Arg Gly Gly Leu
 85 90 95
 Ala Leu Gln Arg His Glu Leu His Ala Ala Leu Leu Glu Gly Leu Asp
 100 105 110
 Glu Ser Arg Ile Arg Val Gly Val Ser Ile Val Gln Ile Leu Asp Gly
 115 120 125
 Leu Asp His Glu Arg Val Thr Leu Ser Asp Gly Thr Val His Asp Cys
 130 135 140
 Ser Leu Val Val Gly Ala Asp Gly Ile Arg Ser Ser Val Arg Arg Tyr
 145 150 155 160
 Val Trp Pro Glu Ala Thr Leu Arg His Ser Gly Glu Thr Cys Trp Arg
 165 170 175
 Leu Val Val Pro His Arg Leu Glu Asp Ala Glu Leu Ala Gly Glu Val
 180 185 190
 Trp Gly His Gly Lys Arg Leu Gly Phe Ile Gln Ile Ser Pro Arg Glu
 195 200 205
 Met Tyr Val Tyr Ala Thr Leu Lys Val Arg Arg Glu Glu Pro Glu Asp
 210 215 220
 Glu Glu Gly Phe Val Thr Pro Gln Arg Leu Ala Ala His Tyr Ala Asp
 225 230 235 240
 Phe Asp Gly Ile Gly Ala Ser Ile Ala Arg Leu Ile Pro Ser Ala Thr
 245 250 255
 Thr Leu Val His Asn Asp Leu Glu Glu Leu Ala Gly Ala Ser Trp Cys
 260 265 270
 Arg Gly Arg Val Val Leu Ile Gly Asp Ala Ala His Ala Met Thr Pro
 275 280 285
 Asn Leu Gly Gln Gly Ala Ala Met Ala Leu Glu Asp Ala Phe Leu Leu

290	295	300
Ala Arg Leu Trp Cys Leu Ala Pro Arg Ala Glu Thr Leu Ile Leu Phe		
305	310	315
Gln Gln Gln Arg Glu Ala Arg Ile Glu Phe Ile Arg Lys Gln Ser Trp		
325	330	335
Ile Val Gly Arg Leu Gly Gln Trp Glu Ser Pro Trp Ser Val Trp Leu		
340	345	350
Arg Asn Thr Leu Val Arg Leu Val Pro Asn Ala Ser Arg Arg Arg Leu		
355	360	365
His Gln Arg Leu Phe Thr Gly Val Gly Glu Met Ala Ala Gln		
370	375	380

<210> 14
<211> 398
<212> PRT
<213> *Pseudomonas aeruginosa*

<400> 14
Met Thr Asp Asn His Ile Asp Val Leu Ile Asn Gly Cys Gly Ile Gly
1 5 10 15
Gly Ala Met Leu Ala Tyr Leu Leu Gly Arg Gln Gly His Arg Val Val
20 25 30
Val Val Glu Gln Ala Arg Arg Glu Arg Ala Ile Asn Gly Ala Asp Leu
35 40 45
Leu Lys Pro Ala Gly Ile Arg Val Val Glu Ala Ala Gly Leu Leu Ala
50 55 60
Glu Val Thr Arg Arg Gly Gly Arg Val Arg His Glu Leu Glu Val Tyr
65 70 75 80
His Asp Gly Glu Leu Leu Arg Tyr Phe Asn Tyr Ser Ser Val Asp Ala
85 90 95
Arg Gly Tyr Phe Ile Leu Met Pro Cys Glu Ser Leu Arg Arg Leu Val
100 105 110
Leu Glu Lys Ile Asp Gly Glu Ala Thr Val Glu Met Leu Phe Glu Thr
115 120 125
Arg Ile Glu Ala Val Gln Arg Asp Glu Arg His Ala Ile Asp Gln Val
130 135 140
Arg Leu Asn Asp Gly Arg Val Leu Arg Pro Arg Val Val Val Gly Ala
145 150 155 160
Asp Gly Ile Ala Ser Tyr Val Arg Arg Arg Leu Leu Asp Ile Asp Val
165 170 175
Glu Arg Arg Pro Tyr Pro Ser Pro Met Leu Val Gly Thr Phe Ala Leu
180 185 190
Ala Pro Cys Val Ala Glu Arg Asn Arg Leu Tyr Val Asp Ser Gln Gly
195 200 205
Gly Leu Ala Tyr Phe Tyr Pro Ile Gly Phe Asp Arg Ala Arg Leu Val
210 215 220
Val Ser Phe Pro Arg Glu Glu Ala Arg Glu Leu Met Ala Asp Thr Arg
225 230 235 240
Gly Glu Ser Leu Arg Arg Arg Leu Gln Arg Phe Val Gly Asp Glu Ser
245 250 255
Ala Glu Ala Ile Ala Ala Val Thr Gly Thr Ser Arg Phe Lys Gly Ile
260 265 270
Pro Ile Gly Tyr Leu Asn Leu Asp Arg Tyr Trp Ala Asp Asn Val Ala
275 280 285
Met Leu Gly Asp Ala Ile His Asn Val His Pro Ile Thr Gly Gln Gly
290 295 300

Met	Asn	Leu	Ala	Ile	Glu	Asp	Ala	Ser	Ala	Leu	Ala	Asp	Ala	Leu	Asp
305															320
Leu	Ala	Leu	Arg	Asp	Ala	Cys	Ala	Leu	Glu	Asp	Ala	Leu	Ala	Gly	Tyr
														335	
Gln	Ala	Glu	Arg	Phe	Pro	Val	Asn	Gln	Ala	Ile	Val	Ser	Tyr	Gly	His
														350	
340														345	
Ala	Leu	Ala	Thr	Ser	Leu	Glu	Asp	Arg	Gln	Arg	Phe	Ala	Gly	Val	Phe
														365	
355														360	
Asp	Thr	Ala	Leu	Gln	Gly	Ser	Ser	Arg	Thr	Pro	Glu	Ala	Leu	Gly	Gly
														375	
370														380	
Glu	Arg	Ser	Tyr	Gln	Pro	Val	Arg	Ser	Pro	Ala	Pro	Leu	Gly		
385														395	

<210> 15

<211> 560

<212> DNA

<213> Pseudomonas aeruginosa

<400> 15

gtaggttcc	tcttcggcag	gctcgccag	tgtactacgc	aatgggattt	caacagggaa	60
gcctgaaaat	ggcaggcgag	gcggggcgga	gchgctatcg	cccgatggat	ggccgcctgc	120
ttccagggat	gcccgtcccc	ccttggagcc	cagggcgagc	gcctcgaact	gtgagatttg	180
ggaggcgatt	tgccgagcaa	agtgggtgt	cattggtttgc	ccatctcatg	ggttccggacg	240
aggcctcgag	caagggttgt	aacggttttt	gtctggccaa	tgggcttgg	cgtaaaaagg	300
ctgcccctt	tcttgcttgg	ttggcggttct	cgatcccgcc	gcagccccgg	gggtgtgcca	360
aatttctcgc	ggtttggatc	gcccggatttgc	ccggccctta	cgaaagccccgt	ggttcttctc	420
cccgaaactt	tttcgttccgg	actccgaata	tcgcgttccg	cccagcgccg	ctagtttccc	480
gttcctgaca	aagcaagcg	tctggctcag	gtatctcttg	atccggatgc	atatcgctga	540
agagggaacg	ttctgtcatg					560

<210> 16

<211> 999

<212> DNA

<213> Pseudomonas aeruginosa

<400> 16

atgcctattc	ataaacctgaa	tcacgtgaac	atgttctcc	aggtcatcg	ctccggttc	60
atttcctccg	ctgcgcggat	cctgcgcgaa	tcgcacaccg	cggtcagctc	ggcggtcagc	120
aacctgaaa	tcgacctgt	cgtggagct	gtccgtcggg	acggctacaa	gttcgaaccc	180
accgagcagg	cgcttcgcct	gatcccttac	atgcgcagcc	tgctgaacta	ccagcagctg	240
atcggcgaca	tcgccttcaa	tctcaacaag	ggtccgcgca	atctccgggt	gtgcgtggac	300
accgcacatcc	cgccgtcggt	ctgcgatacg	gtgagcagcg	tactgctcg	cgatttcaac	360
atggtcagcc	tgatacgcac	ctgcggccgc	gatagcctgg	cgacgatcaa	gcaggacaac	420
gcggaaatcg	ataatcgccat	caccatcgac	gaggaactga	agatctccc	tttcaaccag	480
tgcgtgtcg	gtcacaccaa	ggcggttc	gtcgccccatc	cgcagcaccc	gttgcgtcaat	540
gcctccctgc	acagcatacg	gagcctggcc	aattaccggc	agatcagct	cgccagccgc	600
tccgggcagc	attcgaacct	gctgcggccg	gtcagcgaca	aggtgtctt	cggtggaaaac	660
ttcgcacaca	tgtgtcgct	ggtggaaagcc	ggcgtcggt	ggggcatacg	gccgcattat	720
ttcgtcgagg	aacgcctgcg	caacggtaac	ctggcagttcc	tcagcgaact	ctacgaaccc	780
ggcggcatacg	acaccaaggt	gtattgtac	tacaacaccg	cgcttggaaatc	cgagcgcagc	840
ttcctgcgt	ttctcgaaag	cgccccggcag	cgccctgcgcg	aactcggccg	ccagcgtttc	900
gacgatgcgc	cggcctggca	accgagcata	gtcgaaaacgg	cgccagcgccg	ctcaggcccc	960
aaggcgtcg	cgtaccgcca	gcccgcggca	ccagactag			999

<210> 17

<211> 332

<212> PRT

<213> *Pseudomonas aeruginosa*

<400> 17
Met Pro Ile His Asn Leu Asn His Val Asn Met Phe Leu Gln Val Ile
1 5 10 15
Ala Ser Gly Ser Ile Ser Ser Ala Ala Arg Ile Leu Arg Lys Ser His
20 25 30
Thr Ala Val Ser Ser Ala Val Ser Asn Leu Glu Ile Asp Leu Cys Val
35 40 45
Glu Leu Val Arg Arg Asp Gly Tyr Lys Val Glu Pro Thr Glu Gln Ala
50 55 60
Leu Arg Leu Ile Pro Tyr Met Arg Ser Leu Leu Asn Tyr Gln Gln Leu
65 70 75 80
Ile Gly Asp Ile Ala Phe Asn Leu Asn Lys Gly Pro Arg Asn Leu Arg
85 90 95
Val Leu Leu Asp Thr Ala Ile Pro Pro Ser Phe Cys Asp Thr Val Ser
100 105 110
Ser Val Leu Leu Asp Asp Phe Asn Met Val Ser Leu Ile Arg Thr Ser
115 120 125
Pro Ala Asp Ser Leu Ala Thr Ile Lys Gln Asp Asn Ala Glu Ile Asp
130 135 140
Ile Ala Ile Thr Ile Asp Glu Glu Leu Lys Ile Ser Arg Phe Asn Gln
145 150 155 160
Cys Val Leu Gly Tyr Thr Lys Ala Phe Val Val Ala His Pro Gln His
165 170 175
Pro Leu Cys Asn Ala Ser Leu His Ser Ile Ala Ser Leu Ala Asn Tyr
180 185 190
Arg Gln Ile Ser Leu Gly Ser Arg Ser Gly Gln His Ser Asn Leu Leu
195 200 205
Arg Pro Val Ser Asp Lys Val Leu Phe Val Glu Asn Phe Asp Asp Met
210 215 220
Leu Arg Leu Val Glu Ala Gly Val Gly Trp Gly Ile Ala Pro His Tyr
225 230 235 240
Phe Val Glu Glu Arg Leu Arg Asn Gly Thr Leu Ala Val Leu Ser Glu
245 250 255
Leu Tyr Glu Pro Gly Gly Ile Asp Thr Lys Val Tyr Cys Tyr Tyr Asn
260 265 270
Thr Ala Leu Glu Ser Glu Arg Ser Phe Leu Arg Phe Leu Glu Ser Ala
275 280 285
Arg Gln Arg Leu Arg Glu Leu Gly Arg Gln Arg Phe Asp Asp Ala Pro
290 295 300
Ala Trp Gln Pro Ser Ile Val Glu Thr Ala Gln Arg Arg Ser Gly Pro
305 310 315 320
Lys Ala Leu Ala Tyr Arg Gln Arg Ala Ala Pro Glu
325 330